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DEPARTMENT OF RECONSTRUCTION AND SUPPLY

ECONOMIC RESEARCH BRANCH

EMPLOYMENT AND INCOME IN CANADA  
OUTLOOK FOR 1948

FIRST REPORT

FEBRUARY, 1948.

OTTAWA, CANADA







FOREWORD

This report, the first for 1948, is one of a series, prepared and distributed periodically to senior administrative officers in the Federal Service. The purpose of the reports is to appraise what current and prospective economic trends may be expected to involve in terms of the level of employment and income during the coming year.

The report consists of three parts: Part I contains the Summary, and Tables which set forth the outlook in quantitative terms: Part II, "The National Outlook", is made up of two sections, "Over-all Appraisal" and "Appraisal of Economic Flows", the latter being of more technical than general interest: Part III is the "Industrial and Regional Outlook" with a section devoted to each.

Alex Skelton  
Director General of Economic Research,  
Department of Reconstruction and Supply.

Ottawa, February 18, 1948.

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This report, dated 10/10/54, was prepared by the  
National Security Council Intelligence Directive (NSC-5412) and  
is classified "Secret" in accordance with the provisions of  
Executive Order 11652, dated 10/10/54. It contains information  
of a confidential nature and its disclosure to unauthorized  
persons could be injurious to the national defense.  
The report was prepared by the Central Intelligence Agency  
and is being furnished to the Department of Defense for  
information. It is being classified "Secret" in accordance  
with the provisions of Executive Order 11652, dated 10/10/54.  
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### SUMMARY OF THE OUTLOOK

There is impressive evidence that following an extraordinarily active and prosperous year in 1947, the Canadian boom will continue through 1948. This does not guarantee prosperity for all, or an equitable division of prosperity, or assurance of prosperity in the future, but it does indicate levels of production, of gross money incomes, and of consumption which are above any previously known in Canada, and which are spectacular in comparison with conditions in most of the rest of the world today.

Gross National Product in 1948 should increase, subject to some qualifications to be mentioned, 10% to 15% above the record \$13 billion level of 1947. The major portion of this anticipated increase will come from higher prices resulting from the continued pressure of overall demand on supply. There should also be some increase in actual physical volume of production assuming, - and these are important qualifications, - assuming average crop yields and no serious industrial labour trouble.

There are also other factors affecting the outlook pro and con, or up and down. On the one hand there will be an increase of about 2% in the labour force, and there should be an appreciable increase in productivity resulting from greater experience and stability of labour following the post-war period of shifts and adjustments; from a more regular flow of materials in some industries which have been particularly embarrassed by shortages; and from new and better machinery. On the other hand the exchange restrictions will have some varied and dislocating effects on employment: in some cases investment will be stimulated, and in others there will be enforced stoppages involving some loss of productivity and an increase in frictional unemployment.

Another major influence on the short and long run prospects of the Canadian economy is the progress of the recovery of Europe and of international trade. Of particular importance this year is the fate of the U.S. European Recovery Plan. The E.R.P. is perhaps of more psychological than material importance to Canada this year, but the objective of re-establishing the Western European economy and market is of basic importance to our future.



1. The first part of the document is a list of names and addresses, which appears to be a directory or a list of contacts. The names are written in a cursive script, and the addresses are listed below them.



Foreign Demand - With or without E.R.P. purchases, it appears that the market will continue to absorb virtually all the surpluses of Canada's major export items including agricultural products, metals and forest products, and of specialized manufactures. Reduced sales of some of these items to overseas markets will in the main be offset by larger purchases on the part of the United States where continuing high levels of economic activity are anticipated. If E.R.P. orders materialize toward the end of the year foreign demand will be reinforced to that extent, although declining purchases of some products of minor importance, particularly in manufacturing lines, can be expected.

Domestic Demand - Largely as a result of higher wage and salary payments and increased farm income, money payments accruing to individuals for spending should generally keep pace with rising consumer prices. Sharp increases in food and clothing prices, which are of relatively greater importance to low income budgets, and to fixed salary, investment and pension recipients, will serve to decrease effective buying power of some groups. Shortages resulting from import restrictions will tend to force prices higher but may also restrict purchasing. Nevertheless, in real terms, consumer demand should be much the same as in 1947 even though there may be some areas of weakness.

In new construction, plant and equipment, a national survey of intentions indicates a planned expenditure about 18% above the record level of 1947. The actual volume of new capital construction after allowance for price increases, is estimated at only slightly more than in 1947. There are, however, accumulated backlogs of expenditure, particularly in the government and utility sectors, which are not included in the 1948 forecast, but which would be put under way if labour and materials should be available. At the present level of business activity there is a continuing demand for more inventories, although accumulation during 1948 may not equal that of the previous year. Finally, government demands in 1948 are likely to be a little above those of the previous year after allowance is made for higher costs.

Supply and the Outlook for Particular Industries - If crop yields are favourable and there are no serious labour disputes, a small improvement in the volume of home-produced goods and services can be expected. The



Foreign Demand - With no known U.S. purchases, it appears that the market will continue to expand rapidly all the way through 1945.

Major export items include aircraft and products, metals and alloys, and other goods.

Production, and of specialized equipment. Estimated sales of some of these items to overseas markets will be in the order of \$100 million.

On the part of the United States, exports of aircraft and other goods will be in the order of \$100 million.

Activity is anticipated. It is expected that the volume of exports will be in the order of \$100 million.

The year 1945 is expected to be a record year for exports, although the volume of exports will be in the order of \$100 million.

Production of some of the major export items will be in the order of \$100 million.

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labour force will be larger by about 93,000 persons as a result of natural increase plus immigration. With the labour force redistributed, production now organized to meet peacetime needs, and many critical shortages reduced or eliminated, output per worker is expected to show a progressive improvement. However, in agriculture the feed shortage will limit output of some meat, poultry and dairy products well into 1948, and in industry continuing shortages, notably in steel, will hinder expansion in some directions.

In terms of specific commodities lately in short supply, the prospects are for about the same volume of production of lumber, with an expansion in B. C. offsetting a decline in the Maritimes, and the United States absorbing a larger share of a substantially unchanged volume of exports. Lumber prices are expected to remain firm. With an improved labour supply in the woods, in particular for the pulpwood cut, and new mill capacity coming into operation during the course of the year, more newsprint will be available for export at generally high prices. Only a small improvement in the output of base metals is anticipated, although prices and markets are expected to be firm. An appreciably better output of non-metallic minerals and an important improvement in the supply of building materials are indicated. However, no appreciable increase is expected in the output of primary iron and steel, and this will hold activity in steel-using industries below the level their fabricating capacity and markets would warrant. Thus with some significant exceptions, and on the conditions stated - most importantly, uninterrupted production - there should be a moderate increase in the output of goods for use at home or abroad.

However, the supply of goods for consumer use is expected to be little changed from 1947. This development will arise as a result of measures to restrict imports and conserve U.S. dollars. Probably the principal shortage in consumer soft goods lines will be in cotton textiles, while in the durables, where demand is most insistent, the expansion of output that would otherwise have taken place in almost all lines will be constrained by the new excise taxes, and in some cases by restrictions on the import of components. The limitations on supply, combined with high employment and rising incomes account, in part, for the relatively severe







pressure on consumer prices that is envisaged.

Distribution of G.N.P. among Expenditure and Income Components - As a result of the interaction of these demand and supply forces a dollar gross national product roughly 10 to 15 per cent over that of 1947 can be expected. The disposition of this product among Government, consumers, investors, and foreign buyers will not be appreciably changed from the previous year. Allowing for some purchases toward the end of the year under the Marshall Plan, exports may nevertheless show the smallest increase over the 1947 level, as a result of limited supplies of important items, larger domestic requirements, and some decline in overseas demand for some less important products. Dollar expenditures by each of the other groups are expected to increase in roughly the same proportion as total national expenditure.

With respect to the distribution of national income, the share accruing to farmers should show a greater than average increase owing to the fairly substantial rise in farm prices, larger retroactive wheat payments, and somewhat higher production if crop yields are normal. Wage and salary payments, income of small businesses, and receipts from indirect taxes (less subsidies) are expected to show roughly an average increase. On the other hand, investment income may show a somewhat smaller proportionate increase.

The Regional Outlook -

While the major Canadian regions are subject to many different influences, the combination of circumstances now appears such that the outlook for all regions, with the exception of the Maritimes, appears about equally favourable. This assumes, of course, average crop yields, always particularly significant for the prairies, but somewhat less so this year because of payments on past years' crops. In the Maritimes the recurrence of some chronic economic disabilities, and the loss of some U.K. markets, are likely to restrict the general level of activity to somewhat less than the relatively unfavourable one of 1947, and to increase the relatively high unemployment in some areas. Spotty unemployment is likely in Quebec, and also in B.C. as a result of the large recent influx of population to that province. Ontario may well continue to extend its lead in absolute terms, and to share the leadership with Alberta and B.C.







on relative terms in the further national expansion anticipated in 1948.







TABLE I

## GROSS NATIONAL PRODUCT AND GROSS NATIONAL EXPENDITURE, 1947 AND 1948

(millions of dollars)

Income	Preliminary Estimate 1947	First Forecast 1948	Anticipated Change P.C.	Expenditure	Preliminary Estimate 1947	First Forecast 1948	Anticipated Change P.C.
1. Salaries, wages and supplementary labour income	6,125	6,980	+14	1. Personal expenditure on consumer goods and services	8,711	9,725	+12
2. Military pay and allowances	83	80	- 4	2. Government expenditure on goods & services	1,500	1,650	+10
3. Investment income	2,060	2,135	+ 4	3. Gross home investment (a) Plant, equipment and housing (b) Inventories	2,822 2,042 780	3,100 2,400 700	+10 +13 -13
4. Net income of individual enterprise Agriculture Other	2,467 1,377 1,090	2,790 1,600 1,190	+13 +16 + 9	4. Exports of goods and services	3,538	3,565	+ 1
5. Net National Income at factor cost	10,735	11,985	+12	5. Deduct - Imports of goods and services	3,576	3,440	- 4
6. Indirect taxes less subsidies	1,538	1,740	+13	6. Residual error of estimate	+ 57	-	-
7. Depreciation allowances and similar business costs	835	875	+ 5	7. Gross National Expenditure at Market Prices	13,052	14,600	+12
8. Residual error of estimate	- 56	-	-				
9. Gross National Product at Market Prices	13,052	14,600	+12				



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TABLE II

PERSONAL EXPENDITURE ON CONSUMER GOODS AND SERVICES, 1947 AND 1948

(millions of dollars)

	Preliminary Estimate 1947	First Forecast 1948	Anticipated Change P.C.
Goods	6,366	7,233	+ 14
Perishable goods	3,791	4,272	+ 13
Semi-durable goods	1,294	1,439	+ 11
Durable goods	586	688	+ 17
Miscellaneous goods(1)	695	796	+ 15
Services	2,375	2,590	+ 9
Net personal expenditure abroad	- 30	- 60	- 100
Personal expenditure on consumer goods and services	8,711	9,725	+ 12

(1) The 1947 estimate for this category includes a number of adjusting items. Of particular importance is the allowance made for consumer expenditure through newly established businesses whose sales would not be reflected in existing retail sales series. The forecast for this category also makes provision for some sales through new outlets.



Table 1

Table 1. Summary of the data collected during the study.

Table 1. Summary of the data collected during the study.

Variable	Mean	Standard Deviation	Range
Age	25.5	3.2	18-35
Gender	Male	Female	Male
Education	High School	College	University
Occupation	Student	Teacher	Engineer
Income	Low	Medium	High
Marital Status	Single	Married	Divorced
Religion	Islam	Christianity	Judaism
Language	Arabic	English	French
Health Status	Good	Fair	Poor
Smoking Status	Non-smoker	Smoker	Former Smoker
Alcohol Consumption	None	Occasional	Frequent
Exercise Frequency	None	Low	High
Dietary Habits	Vegetarian	Non-vegetarian	Flexitarian
Stress Level	Low	Medium	High
Sleep Quality	Good	Fair	Poor
Mental Health	Stable	Anxious	Depressed
Physical Health	Good	Fair	Poor
Life Satisfaction	High	Medium	Low
Overall Well-being	Good	Fair	Poor

The data collected during the study were analyzed using statistical methods. The results of the analysis are presented in Table 2. The data show that the majority of the participants were young adults, with a mean age of 25.5 years. The majority of the participants were male, and the majority of the participants were students. The majority of the participants were of high school or college education, and the majority of the participants were of low income. The majority of the participants were single, and the majority of the participants were of Islamic religion. The majority of the participants spoke Arabic, and the majority of the participants were in good health. The majority of the participants were non-smokers, and the majority of the participants did not consume alcohol. The majority of the participants exercised at a low frequency, and the majority of the participants were vegetarians. The majority of the participants had a low stress level, and the majority of the participants had good sleep quality. The majority of the participants had stable mental health, and the majority of the participants had good physical health. The majority of the participants had a high life satisfaction, and the majority of the participants had good overall well-being.

TABLE III  
ESTIMATED VALUE OF PRIVATE INVESTMENT IN PHYSICAL DURABLE

ASSETS AND IN INVENTORIES, 1947 AND 1948

(Includes Government-Owned Enterprises)

(millions of dollars)

Type of Expenditure	Preliminary Estimate 1947	First Forecast 1948	Anticipated Change P.C.
Investment in Durable Physical Assets			
Manufacturing	513	554	+ 8
Mining	76	88	+ 16
Woods Operations	25	23	- 8
Utilities	372	477	+ 28
Construction	46	38	- 17
Commercial	233	271	+ 16
Agriculture and Fishing (excluding housing)	267	315	+ 18
Institutions(1)	44	86	+ 95
Residential(2)	466	544	+ 17
Sub-total	2,042	2,396	+ 17
Investment in Inventories			
Industrial and Business	789	635	- 20
Grain in Commercial Channels	22	100	+355
Farm	- 31	- 35	- 13
Sub-total	780	700	- 10
Total Domestic Private Investment	2,822	3,096	+ 10

(1) This excludes expenditures by municipal schools estimated at \$31 million for 1947 and \$53 million for 1948. These are covered under government expenditure.

(2) This excludes the value of residential housing carried out by Wartime Housing Ltd., estimated at \$35 million for 1947, and \$50 million for 1948. It includes expenditures for major alterations estimated at \$50 million for 1947 and \$55 million for 1948.





TABLE IV  
ESTIMATED VALUE OF PRINCIPAL CANADIAN EXPORTS,

1947 and 1948

(millions of dollars)

Commodity Groups (1)	Value of Exports	
	1947(2)	1948
Grains, vegetables, fruits and tobacco	349	335
Processed grain and vegetable products	239	200
Meat products	103	100
Cheese, eggs and milk products	65	65
Live animals	16	16
Furs	28	28
Fish products	73	67
Leather and products	19	14
Textiles	49	38
Pulp and paper products	528	585
Lumber products	327	340
Metals	259	290
Minerals (non-metallic)	39	42
Machinery, equipment and consumer durables	230	230
Chemical products (including crude rubber)	92	92
Ships, aircraft and electrical energy	36	80
Small items	323	268
Total Exports	2,775	2,790

(1) In general the commodity groups shown include only the more important export commodities. All items individually of lesser importance are included in the "Small Items" category.

(2) Based on "Trade of Canada" figures.



# Introduction

The purpose of this document is to provide a comprehensive overview of the project's objectives, scope, and deliverables.

## Project Objectives

The primary objectives of this project are:

1. To develop a robust and scalable software solution that meets the needs of the organization.

2. To ensure that the solution is user-friendly and easy to integrate with existing systems.

3. To maintain a high level of security and data integrity throughout the project lifecycle.

4. To provide regular communication and reporting to stakeholders to ensure transparency and accountability.

5. To ensure that the project is completed on time and within budget.

6. To ensure that the solution is tested thoroughly and meets all requirements.

7. To ensure that the solution is deployed successfully and monitored for performance.

8. To ensure that the solution is maintained and updated as needed.

9. To ensure that the solution is scalable and can handle future growth.

10. To ensure that the solution is secure and complies with all relevant regulations.

11. To ensure that the solution is user-friendly and easy to learn.

12. To ensure that the solution is tested thoroughly and meets all requirements.

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31. To ensure that the solution is deployed successfully and monitored for performance.

32. To ensure that the solution is maintained and updated as needed.

TABLE V

NET BALANCE ON INTERNATIONAL CURRENT ACCOUNT, 1947 AND 1948

(millions of dollars)

	(1) Preliminary Estimate 1947		First Forecast 1948	
	Credits	Debits	Credits	Debits
(2)				
Merchandise	2,728	2,536	2,700	2,465
Non-monetary gold	99	-	115	-
Tourist expenditures	231	167	250	120
Interest and dividends	61	335	60	335
Freight and shipping	290	252	265	245
Inheritances, immigrant and emigrant transfers	74	50	85	50
War Supplies Ltd.	13	-	-	-
All other current	197	282	165	275
Total Current	3,693	3,622	3,640	3,490
Net Balance on Current Account	71		150	
Reconciliation to "National Accounts"				
Less: Mutual Aid, U.N.R.R.A. and other official aid	38	-	20	-
War Supplies Ltd.	13	-	-	-
Inheritances, immigrant and emigrant transfers and miscellaneous adjustments	104	46	55	50
Total Current (reconciled to National Accounts)	3,538	3,576	3,565	3,440

- (1) These estimates are tentative and will be subject to change as additional information becomes available.
- (2) For the purposes of calculating the balance of payments on current account, exports and imports to and from Newfoundland are excluded. However, since the net balance with Newfoundland constitutes part of Gross National Expenditure, it is taken into account partly in the "All other Current" item and partly in the reconciliation. This and certain other adjustments account for the discrepancy between merchandise exports as indicated above and totals appearing in Table IV.



THEORY

Let  $f(x)$  be a function defined on the interval  $[a, b]$ . The function  $f(x)$  is said to be continuous at the point  $x_0$  if and only if the following conditions are satisfied:

1.  $f(x)$  is defined at  $x_0$ .
  2.  $\lim_{x \rightarrow x_0} f(x)$  exists.
  3.  $\lim_{x \rightarrow x_0} f(x) = f(x_0)$ .
- Let  $f(x)$  be a function defined on the interval  $[a, b]$ . The function  $f(x)$  is said to be continuous on the interval  $[a, b]$  if and only if it is continuous at every point  $x_0$  in the interval  $[a, b]$ .
- Let  $f(x)$  be a function defined on the interval  $[a, b]$ . The function  $f(x)$  is said to be continuous from the right at the point  $x_0$  if and only if the following conditions are satisfied:
1.  $f(x)$  is defined at  $x_0$ .
  2.  $\lim_{x \rightarrow x_0^+} f(x)$  exists.
  3.  $\lim_{x \rightarrow x_0^+} f(x) = f(x_0)$ .
- Let  $f(x)$  be a function defined on the interval  $[a, b]$ . The function  $f(x)$  is said to be continuous from the left at the point  $x_0$  if and only if the following conditions are satisfied:
1.  $f(x)$  is defined at  $x_0$ .
  2.  $\lim_{x \rightarrow x_0^-} f(x)$  exists.
  3.  $\lim_{x \rightarrow x_0^-} f(x) = f(x_0)$ .

PROPERTIES OF CONTINUOUS FUNCTIONS

1. If  $f(x)$  and  $g(x)$  are continuous functions defined on the interval  $[a, b]$ , then the functions  $f(x) + g(x)$ ,  $f(x) - g(x)$ ,  $cf(x)$  (where  $c$  is a constant), and  $\frac{f(x)}{g(x)}$  (where  $g(x) \neq 0$ ) are also continuous functions defined on the interval  $[a, b]$ .
2. If  $f(x)$  is a continuous function defined on the interval  $[a, b]$ , then the function  $f(x)$  is also continuous on the interval  $[a, b]$ .
3. If  $f(x)$  is a continuous function defined on the interval  $[a, b]$ , then the function  $f(x)$  is also continuous on the interval  $[a, b]$ .
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1.  $f(x)$  is defined at  $x_0$ .
2.  $\lim_{x \rightarrow x_0} f(x)$  exists.
3.  $\lim_{x \rightarrow x_0} f(x) = f(x_0)$ .

Let  $f(x)$  be a function defined on the interval  $[a, b]$ . The function  $f(x)$  is said to be continuous on the interval  $[a, b]$  if and only if it is continuous at every point  $x_0$  in the interval  $[a, b]$ .

Let  $f(x)$  be a function defined on the interval  $[a, b]$ . The function  $f(x)$  is said to be continuous from the right at the point  $x_0$  if and only if the following conditions are satisfied:

1.  $f(x)$  is defined at  $x_0$ .
2.  $\lim_{x \rightarrow x_0^+} f(x)$  exists.
3.  $\lim_{x \rightarrow x_0^+} f(x) = f(x_0)$ .

Let  $f(x)$  be a function defined on the interval  $[a, b]$ . The function  $f(x)$  is said to be continuous from the left at the point  $x_0$  if and only if the following conditions are satisfied:

1.  $f(x)$  is defined at  $x_0$ .
2.  $\lim_{x \rightarrow x_0^-} f(x)$  exists.
3.  $\lim_{x \rightarrow x_0^-} f(x) = f(x_0)$ .

TABLE VI

GOVERNMENT EXPENDITURE ON GOODS AND SERVICES, 1947 AND 1948<sup>(1)</sup>  
(millions of dollars)

Type of Expenditure		Federal	Provincial	Municipal <sup>(2)</sup>	Total
New Construction	1947	77.8 <sup>(3)</sup>	128.7	104.1	310.6
	1948	95.9 <sup>(3)</sup>	133.5	137.8	367.2
New Machinery & Equipment	1947	17.5	12.6	15.1	45.2
	1948	21.3	12.3	15.7	49.3
Repair & Maintenance to Structures	1947	9.0	53.2	59.8	122.0
	1948	4.9	56.0	64.9	125.8
Repair and Maintenance to Machinery & Equipment	1947	13.5	4.5	4.1	22.1
	1948	14.0	4.8	4.4	23.2
Resource Development	1947	9.0	12.8	-	21.8
	1948	11.0	15.3	-	26.3
Other Goods and Services	1947	528.5	152.4	297.8	978.7
	1948	572.9	173.1	312.2	1058.2
Total Goods and Services	1947	655.3	364.2	480.9	1500.4
	1948	720.0	395.0	535.0	1650.0

- (1) In the distribution between federal, provincial and municipal sectors, expenditures are included at the level of government where the goods or services are actually purchased. For example, federal government subsidies to the provinces are excluded from "Federal" expenditures but would appear in "Provincial".
- (2) Includes expenditures on housing made under the Emergency Shelter Regulations and also on schools.
- (3) Includes expenditures on residential construction made by Central Mortgage and Housing Corporation.



# Table 1

1960-1961

Observations		Interval		Frequency	
Year	Month	Start	End	Count	Percentage
1960	Jan	1.00	1.25	100	10.0
1960	Feb	1.25	1.50	100	10.0
1960	Mar	1.50	1.75	100	10.0
1960	Apr	1.75	2.00	100	10.0
1960	May	2.00	2.25	100	10.0
1960	Jun	2.25	2.50	100	10.0
1960	Jul	2.50	2.75	100	10.0
1960	Aug	2.75	3.00	100	10.0
1960	Sep	3.00	3.25	100	10.0
1960	Oct	3.25	3.50	100	10.0
1960	Nov	3.50	3.75	100	10.0
1960	Dec	3.75	4.00	100	10.0
1961	Jan	4.00	4.25	100	10.0
1961	Feb	4.25	4.50	100	10.0
1961	Mar	4.50	4.75	100	10.0
1961	Apr	4.75	5.00	100	10.0
1961	May	5.00	5.25	100	10.0
1961	Jun	5.25	5.50	100	10.0
1961	Jul	5.50	5.75	100	10.0
1961	Aug	5.75	6.00	100	10.0
1961	Sep	6.00	6.25	100	10.0
1961	Oct	6.25	6.50	100	10.0
1961	Nov	6.50	6.75	100	10.0
1961	Dec	6.75	7.00	100	10.0

The data in this table are based on the following assumptions:

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TABLE VII

AGRICULTURAL NET INCOME, 1947 AND 1948

(millions of dollars)

	Preliminary Estimate 1947	First Forecast 1948
Cash income from farm products <sup>(1)</sup>	2,002	2,288
Grains, seeds and hay	642	833
Vegetables and other field crops	143	141
Live stock	597	674
Dairy Products	339	373
Fruits	49	50
Other principal farm products	122	100
Miscellaneous farm products	33	35
Forest products sold off farms	61	65
Fur Farming	16	17
Income in kind	319	327
Value of changes in inventory	- 31	- 34
Gross income	2,290	2,581
Operating expenses and depreciation charges	897	970
Net income excluding supplementary payments	1,393	1,611
Supplementary payments	11	15
Net income from farming operations	1,404	1,626
Net income of agriculture <sup>(2)</sup>	1,377	1,597

(1) Includes payments against participation certificates in the year in which they are made.

(2) Net income of agriculture as shown in the D.B.S. "National Accounts - Income and Expenditure, 1938-1946" falls short of net income of farmers from farming operations in that it excludes net transfers under the Prairie Farm Income Act and Farm Assistance Act, as well as an imputed net rent of owner-occupied farm dwellings. The latter would form part of investment income.



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TABLE VIII  
EMPLOYMENT, UNEMPLOYMENT AND THE LABOUR FORCE, 1947 AND 1948  
(thousands of persons)

	Estimated 1947	First Forecast 1948	Anticipated Change P.C.
Wage-earners, (non-farm)	3,087	3,189	+ 3.3
Forestry, fishing & trapping	155	164	+ 5.8
Mining	76	85	+ 11.8(I)
Manufacturing (inc. electric power)	1,084	1,110	+ 2.4
Trade, finance & insurance	553	560	+ 1.3
Services	709	733	+ 3.4
Transportation & communications <sup>(2)</sup>	315	325	+ 3.2
Construction	195	212	+ 8.7
Agriculture	1,115	1,115	-
Own Accounts & No Pays	548	568	+ 3.6
Adjustment <sup>(3)</sup>	+ 50	-	
Employed	4,800	4,872	+ 1.3
Unemployed <sup>(4)</sup>	100	125	+ 25.0
Civilian labour force	4,900	4,997	+ 1.8
Armed Services	37	33	- 10.2
Total labour force	4,937	5,030	+ 1.7

- (1) Part of the increase between the two years is accounted for by the strike of three months' duration in the Maritime coal fields.
- (2) Railway transportation is included with transportation.
- (3) The estimate and forecast of wage-earners (non-farm) are based mainly on the D.B.S. monthly report "The Employment Situation" which affords only partial coverage of employment. Employment as a whole, unemployment and the labour force are estimated and forecast on the basis of the Sample Surveys of the Labour Force and the same definitions and concepts are used. The two series do not show identical trends, largely because of difference in the definition of employment and limitations of coverage in the one series. Hence an adjusting item is required.
- (4) The restrictive nature of the definition should be noted - "those who have not worked in the survey week and whose major activity was looking for work." Persons who work one hour or more or who have a job but are not at work on account of any one of several reasons, illness for example, are considered to be employed.



1. Introduction

The purpose of this study is to investigate the effects of various factors on the growth of plants.

The study was conducted in a controlled environment.

The results of the study are presented in the following sections.

2. Materials

The materials used in this study were of high quality.

The study was conducted in a controlled environment.

The results of the study are presented in the following sections.

The study was conducted in a controlled environment.

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## PART I. THE NATIONAL OUTLOOK

### OVER-ALL APPRAISAL

#### The Current Position

The year 1947 closed with the widespread inflationary pressures that had prevailed throughout the year still in ascendancy. Some softening in foreign demand had been threatening during the latter half of the year; the U.S. dollar shortage problem had become increasingly acute in all trading areas of the world and import restrictions had been tightened in many countries. Nevertheless, foreign requirements continued in excess of Canadian supplies of most of the important export commodities and in the last quarter of 1947 Canadian merchandise exports averaged \$257 million monthly, the highest level in value terms since the war years. Meanwhile, foreign market prospects had improved with the widespread acceptance in the United States of the necessity for some measure of financial aid to Europe. In the domestic market accumulated needs and rising money incomes have maintained a steady pressure upon supplies of both consumer and investment goods. Except in agriculture, and allowing for seasonal influences, the physical volume of production appears to have made some gains during the year. Yet, in spite of a larger volume of supplies from domestic production and from imports, at the end of the year prices were still moving steadily upward. As a result of these buoyant market conditions employment continues to press upon the slightly expanding labour force while unemployment is held to extremely low levels.

The U.S. dollar conservation program announced in November should provide additional impetus to this high level of activity in spite of some initial dislocations and uncertainties. Viewed in relation to total employment, few lay-offs have resulted from the restrictions and with markets firm the reorganization of factors of production involved in the program should take place with a minimum of friction. The overall effects of the austerity measures, even in the relatively short run, should be to create more jobs rather than less. This arises from the fact that domestic productive facilities are now called upon to fill needs previously supplied through imports and at the same time to maintain exports at as high a level as effective demand will permit. In other words the fundamental aim of the program involves for 1948 not only an



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Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

improvement in the balance of trade with the United States but also the realization of a favourable balance on total current account. Since total export and import items achieved an approximate balance for 1947, the realization of this goal in 1948, in the absence of changes in export-import price ratios, would involve a net increase in the demands upon domestic production for this period. The specific effects of this program on different sectors of the economy will be elaborated upon in the following sections, which deal with the principal components of demand and supply.

#### General Demand Aspects

Export Demand - The coming decision by Congress on the European Recovery Program remains the outstanding uncertainty so far as the foreign demand for Canadian goods in 1948 is concerned. The proposal of aid to Europe has gained widespread acceptance in the United States and it is generally assumed that the program will go forward in some form. Difference of opinion exists as to whether it will proceed on a scale commensurate with that set out in the Administration's proposals, or on a reduced scale, with more limited objectives, and on a more temporary basis. The final decision by Congress may not come for several months but so long as the eventual provision of a substantial measure of aid seems probable, little deterioration in foreign market conditions need be anticipated. An aspect of the program having great importance to the Canadian export level is the extent to which the United States will rely on foreign sources for supplies. Such reliance may be substantial, if the provision of the interim aid bill passed at the special session of Congress and the proposals contained in the President's submission to Congress can be taken as a guide. Pending a final decision as to the timing, size, and purchasing procedure under the plan the trend of demand for Canadian exports during 1948 remains clouded.

Irrespective of the outcome of E.R.P., a buoyant U.S. market during 1948 should play an important role in sustaining the level of Canadian exports. The volume of sales to the United States depends in the broadest sense upon the general conditions of prosperity in that country. Although employment and production are currently at their post-war peaks, still rising prices in most sectors of the economy bear witness





to the continuing deficiency of supply. The recent break in farm commodity prices, far from presaging any general recessionary movement, may in fact prove a healthy corrective to the hitherto high relative position of agricultural and food prices. While the decision on the Marshall Plan proposal will have some effect on the demand-supply balance, it is considered that in any event a general inflationary condition will continue at least until mid-year. Softening in some sectors of the economy is considered as a possibility after that date. However, any such recessionary tendencies in the latter half of the year are not likely to be sufficient to affect the level of demand for Canadian products. It seems likely, therefore, that during 1948 the United States will be able to absorb that part of Canadian exports which traditional overseas markets are compelled to forego on account of the shortage of dollars. This should apply in particular to lumber, metals, pulp and paper, and any surplus of agricultural products in excess of the U.K. contract requirements.

Even in manufactured products, which in many cases cannot be sold in the United States market, declining dollar holdings in foreign countries should not impose any widespread hardship on Canadian industries. Exports of heavy steel products, such as farm implements, automobiles, railway rolling stock and ships are limited by the available steel supply rather than by foreign demand. In still other industries, for example, textiles, larger domestic requirements arising from import restrictions will diminish the dependence upon foreign markets.

So far as many of Canada's major export items are concerned, it appears, therefore, that limitation to the expansion of supplies rather than the size of effective demand will be the principal factor restraining the rise in the value of exports - a condition largely attributable to the great absorptive capacity of the United States market at high levels of employment and income.

Private Domestic Investment Demand - Within the principal domestic markets there is even firmer assurance of continuing buoyant demand during 1948. Initial estimates show that non-government investment in capital goods during 1947 constituted nearly 16 per cent of Gross National Product. This is well above the corresponding ratio of

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10 per cent in 1939 and is probably close to the 1929 position. While it is apparent that capital outlay has now attained a high level, it scarcely seems likely that the net addition to capital stock that has taken place since the war would be anywhere near adequate to meet the accumulated needs carried over from the war and depression years, and to support the Canadian economy at a full employment level. That a substantial backlog of capital goods requirements still exists is borne out by the results of the survey of business investment intentions for 1948. A preliminary tabulation of these results (together with independent estimates of some sectors not covered by the survey) indicates an intended dollar outlay on new capital goods from 15 to 20 per cent above that spent in 1947. Prices will probably be about 15 per cent higher on the average in 1948 than in 1947. Consequently, the intended level of investment in real terms may represent only a small increase, over the previous year. At the same time a sizable demand potential no doubt exists that is not represented in the forecast figures. In the utility groups, in particular, not to mention the government sector, there are extensive backlogs of work waiting to go forward whenever labour and material supplies are considered adequate. It seems probable, therefore, that during 1948 investment demand will continue to make full use of all productive facilities within this sector of the economy although supply should show some improvement in its relative position.

A second important phase of private investment relates to changes in inventories. During 1947 substantial increases in industrial and commercial inventories have taken place, in order to build up stocks to the level appropriate to the current volume of production and distribution, although anticipated inventory profits may also have been a motivating factor in some instances. Expectations of rising prices will doubtless play the same role in 1948. However, continuing shortages in some industries have prevented stocks accumulating to the extent that would be desired. There is, therefore, room for continued inventory accumulation in 1948, although some materials in short supply in 1947 are likely to remain so in 1948. The supply of some imported goods cannot now be replenished as they are drawn out of stock, nor is domestic production likely to fill the gap completely. There will thus be a





number of opposing influences at work within this component, whose net effect it is difficult to estimate. On balance, it is probable that inventories will continue to accumulate although at a reduced rate.

Consumer Demand - Consumer demand depends to a large degree upon the volume of income available to individuals for spending. With evidence of continuing strong demand in the investment market and to a somewhat less extent in the foreign market, it seems probable that individual incomes will be well sustained during the coming year. While inflationary forces seem likely to remain dominant, average wages and salaries can be expected to rise along with prices. With the likelihood that employment will continue to press upon a slowly expanding labour force, the anticipated rise in aggregate wages and salaries should sustain this share of total national income. Even in the event of some reduction in output, farmers may improve their relative income position over the previous year as a result of substantial increases in the prices of farm products. Incomes of other individual enterprise and investment income accruing to consumers can also be expected to rise moderately. Repayment of approximately \$50 million of compulsory savings, and lower average personal income tax rates for the year as a whole, will provide additional support to individual purchasing power. Government transfers to individuals may diminish slightly as a result of reduced rehabilitation payments to veterans. In summary, total dollar income available to individuals for spending should be well above the 1947 level while some expansion in consumer credit can also be expected.

While income at the disposal of consumers will be substantially increased, the sharp rise in the prices of food and clothing, which constitute a large and relatively inelastic part of low and middle income budgets, will compel some consumers to restrict their expenditure in other directions, although some others may be able to maintain their standards of consumption by increasing spending relative to income. Nevertheless, at the lowest income levels savings cannot cushion the impact of rising prices. The consumer market, therefore, will not be so uniformly buoyant in 1948 as in 1947. It is to be remembered that the supply of goods available to consumers will be little changed (in spite of the fact that some items will be in appreciably better supply)





since improving domestic production will barely suffice to make good the deficiencies caused by import restrictions. In particular, the supply of consumer durables, where a substantial backlog of demand still exists as well as the means to make the demand effective, will be little changed, so that high prices are not likely to prevent the available supply being taken off the market. Considered in real terms, consumer demand will be much the same as in 1947 so that continuing firmness can be expected in the consumer market, even though there may be some few areas of weakness.

Government Requirements - After allowance is made for increasing costs, government demands in 1948 should be a little greater than in the previous year. So long as capital goods requirements in the private sector remain generally in excess of supply, it will be the policy of the Dominion Government to continue to postpone investment outlay wherever possible. Provincial Government departments also appear to have cut back construction outlays for 1948 as a result of the difficulties encountered in attempting to realize their 1947 programs. Taken together Dominion and Provincial investment expenditures in physical terms should roughly equal those of the previous year. On the other hand, municipalities have a considerably larger volume of work planned for 1948. Provision of other regular government services is not calculated to change appreciably from the previous year, although rising costs will involve an increased money outlay.

#### General Supply Aspects

Since the end of the war several factors have combined to reduce the available labour supply. While the reduction in the number of persons in the total labour force has probably been the most important factor, at the same time the reduction in hours worked and the loss in effectiveness and intensity of effort while the factors of production were being re-deployed, also have been significant, particularly the latter.

Between 1947 and 1948 the total labour force will be increased by about 93,000 persons, as contrasted with substantial losses therefrom in the two previous years. The civilian labour force, the relevant consideration where the supply available to the private sector is concerned, will increase approximately to the same extent, as contrasted with



substantially larger increments in 1946 and 1947. However, since immigrant labour is being directed toward the areas of acute labour shortage, the contribution to the labour supply is perhaps not fully measured by their numbers. So far as hours worked are concerned there is already evidence that the downward trend is being arrested, and indeed reversed in some sectors. It seems reasonable to expect that average hours worked in 1948 will not fall below the level of 1947. Thus the supply of labour, insofar as that has been a limiting factor to the flow of goods and services, would permit an increase in output of nearly 2 per cent. Since unemployment is likely to be moderately higher, the increased volume of output must fall somewhat short of what the increased labour supply would make possible.

The imbalances in production that characterized the transition are being ironed out, some of the heavy investment program is coming to fruition, and a redistributed labour force has acquired some skill and a feeling of stability in their new jobs. These developments are now, and will continue, to be reflected in a smoother and more adequate flow of materials and components, less labour turnover, and as a consequence a progressive improvement in output per worker. A larger labour force combined with a perceptible improvement in average output might seem to suggest an appreciable addition to the supply of goods and services in 1948.

However, there are some special circumstances which seem to alter that conclusion. While the forecast assumes average growing conditions in 1948 (a condition that may not be realized) nevertheless the short crop of feed grains in 1947 will limit livestock production well into 1948 and curtail the volume of farm output in aggregate. In the non-agricultural sector, import restrictions bring renewed emphasis to shortages of materials and components as factors hampering the smooth flow of production and limiting the output of finished goods. Finally, very little, if any improvement is expected in 1948 in the key shortage, namely the shortage of basic steel. This bottleneck limits employment and efficiency in the steel-using industries, and contributes to the increase in unemployment that is envisaged by the forecast. On balance, however, and subject to the conditions that weather is not unfavourable





and production uninterrupted by strikes, it would appear that a small improvement in the volume of home-produced goods and services can be expected.

These expectations can be supported by reference to specific products in short supply. Again this year producers of building and basic materials have been asked to furnish a forecast of their production intentions. In a group of 30 key building materials the production in 1948 of about one-third is expected to be up between 20 and 30 per cent; of another third by 5 to 10 per cent; while the production increases of the remainder will range down from 5 per cent, with the possibility that the production of several items may be off slightly. For basic materials, however, the outlook is much less favourable. The anticipated increase for lumber, gypsum, asbestos, copper and zinc range between 2 and 6 per cent, while little change is expected in the production of pig iron, steel ingots and castings, and in nickel. Such intentions, if realized, would mean a perceptible improvement in the shortages that have plagued the construction industry, and a better supply of some basic materials either for use at home or for sale abroad, but little amelioration in what is probably the most serious shortage of all, namely the shortage of iron and steel.

The restrictions and prohibitions applying to imports will be the main factors operating to limit supplies in 1948. On capital goods, restrictions are selective and they need not be expected to reduce appreciably the volume of imported goods of this description. The restrictions will be administered to direct scarce materials such as steel to the most essential uses, as judged by the end product, rather than to reduce the total consumption. On consumer goods, the restrictions are fairly comprehensive and as a result the goods available for consumption in Canada will probably be no more plentiful than in 1947, if indeed as plentiful. Much depends on the extent to which Canadian production of specific items can be increased and in 1948 any such development will be hampered by lack of productive facilities and lack of labour. Much also depends upon the pace of recovery in the United Kingdom and continental Europe, since this will largely determine their ability to furnish supplies to the Canadian market. When account is taken of the effect of import





restrictions, the outlook for supplies of consumer goods in 1948 does not suggest any improvement.

The major uncertainty on the supply side centres on the possibility of work stoppages, particularly work stoppages in basic industries. In the event of prolonged and widespread industrial unrest a measure of the potential loss must take account, not only of the output foregone in the strike affected industries, but of the widely diffused deterioration of productive efficiency that renewed or accentuated shortages would involve.

The recent termination of the moderate upward trend in real earnings (in which some groups have not shared) and the anticipation of further price increases are bound to stiffen Union demands, while higher profits as reported in financial statements cannot fail to have the same effect. Thus the major share of uncertainty surrounds the concessions management will be prepared to make. If dislocating strikes are avoided some of the higher wage costs could be financed out of improved productivity; much of the remainder could be passed on in the form of higher prices. So long as Canadian price levels remain below those prevailing in other countries an orderly movement toward a higher cost higher price plane need not necessarily curtail markets at home or abroad. Insofar as these arguments enter into the thinking of management, the decision would be to make whatever concessions might be necessary to prevent a stoppage of work. That wages and prices are not unrelated is also apparent to Trade Union members and may act as a restraining influence. While the whole economic situation may seem to foreshadow serious industrial unrest, the alternative - appropriate upward wage and price adjustments - may in fact be realized.

#### Overall Demand and Supply and Price Trends

Viewing the various demand sectors as a whole and allowing for some purchases toward the end of the year under the Marshall Plan, the physical requirements of government, investors, consumers and foreign purchasers appear likely to remain close to 1947 levels, although allowance should be made for some diminution in the backlogs. With respect to the aggregate supply position a potential increase in domestic production (assuming no widespread strike interruptions) may be roughly



offset by the reduced volume of imports. It might be concluded, therefore, that the relative overall positions of demand and supply may be little changed from the previous year. This would suggest that basic inflationary conditions may continue in evidence at least during the greater part of 1948 with much the same force as in 1947.

However, with different conditions pertaining to price controls, price adjustments may follow a somewhat different pattern. During 1947, the price increases that followed de-control in many sectors of the economy were attributable to accumulative cost-price maladjustments and to the removal of subsidies, as well as to the current imbalance between demand and supply. The effects of the last major de-control orders, involving the removal of price ceilings from a number of important food and other consumer items, and the discontinuance of subsidies on coarse grains, had been very much in evidence during recent months in the form of rising food prices. Also, in other instances price increases that took place during 1947 are still in the process of being passed on, in the form of higher costs, to other sectors of the economy. However, with the de-control process now nearly complete and with all temporary subsidy payments now at an end, price rises during 1948 should reflect primarily the basic inflationary forces current within the economy.

The pressure of demand on supply is not likely to take place with equal incidence in different sectors of the economy. Average food prices should not increase noticeably over the present level so long as re-imposed price ceilings on meat, butter and some vegetables continue, and providing present conditions remain in effect with respect to U.K. contract prices and the embargoes on exports of important agricultural products to the United States. However, it is to be remembered that a considerable margin still exists between Canadian and world food prices with no immediate hope of any substantial easing in the acute world shortages. Other commodity groups particularly susceptible to further price increases include iron and steel products and also those items likely to continue in short supply as a result of the import restrictions, cotton goods being the most important example. Other inflationary influences of a general nature include the continuing trend toward higher prices of many commodities in the United States that is expected to





persist at least for some months, the probability of accentuated wage demands arising out of the recent upthrust in the cost of living index, and the effects of higher prices originating in the sectors of acute shortage permeating in the form of higher material and service costs throughout other parts of the economy. On the other hand, in some groups such as building materials, where supplies are moving into an improved position, some levelling in the sharp upward trend of prices experienced during 1947 can be expected. Also, prices of some of the important export items, including metals and lumber, are now considered to be close to the peak of their ascent.

The total effect of these influences points to a less marked aggregate price increase during 1948 than occurred during the previous year. In 1947, the year-end level of the cost of living index was between 7 and 8 per cent above the average level for the year. The increase applicable to other groups of finished goods and services was probably of about the same magnitude. It would, therefore, seem reasonable to expect that the over-all average price level for 1948 would exceed that of the previous year by at least 10 per cent.

#### Gross National Product

With generally full employment of labour and other factors of production anticipated as a result of the buoyant market conditions, it has already been suggested in a previous section that some increase in the total physical volume of production should take place if widespread strikes can be averted. Combining this increase with what appears to be a minimum rise in prices would leave Gross National Product in 1948 at roughly 12 or 13 per cent above that of the previous year. The distribution of this aggregate among the principal expenditure and income components is dealt with in the following sections and appears in tabular form in Table I.

The first part of the paper is devoted to a discussion of the general principles of the theory of the structure of the atom. It is shown that the structure of the atom is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles. The second part of the paper is devoted to a discussion of the structure of the nucleus. It is shown that the structure of the nucleus is determined by the laws of quantum mechanics, which are based on the principle of the uncertainty of the position and momentum of the particles.

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Received March 10, 1935

The author wishes to express his appreciation to the National Science Foundation for the support of this work. He also wishes to express his appreciation to the University of California for the support of this work. The author also wishes to express his appreciation to the University of California for the support of this work. The author also wishes to express his appreciation to the University of California for the support of this work.

U. S. DEPARTMENT OF AGRICULTURE



APPRAISAL OF ECONOMIC FLOWS

Expenditure Components

Exports - On the assumption that the E.R.P. materializes in some form merchandise exports during 1948 have been estimated at close to \$2.8 billion. (See Table IV). Supply continues to be the limiting factor so far as most of Canada's principal exports are concerned and even in the absence of direct E.R.P. purchases in Canada exports during 1948 would probably not be much below this level.

Assuming average crop conditions for the coming season, receipts from the export of farm products are expected to decline, in spite of higher prices under the re-negotiated U.K. contracts and in the world market. This results primarily from the below average crops in 1947. Larger sales to the United States market may hold exports of fish products close to the 1947 level even without additional shipments under European aid measures. On the other hand, exports of pulp and paper are expected to increase considerably in the coming year as a result of both improved volume and higher prices. Larger sales of lumber to the United States will offset reduced shipments to the United Kingdom. The United States is also expected to absorb a larger share of metals, in which some volume increases and some price increases are anticipated. Although heavy machinery is in urgent demand in the foreign market, production is limited by the availability of steel and it has been assumed that exports would remain at approximately last year's level. Sales of chemicals also may remain roughly unchanged. Other types of manufactured items appear more vulnerable to the effects of the dollar shortage. Also, larger domestic requirements, resulting from import restriction in some cases, e.g. textiles, would reduce the volume of exports. The value of exports for this group is, therefore, likely to be substantially lower in 1948 than in the previous year.

In the event of large E.R.P. orders during the latter part of the year, a limited increase in the volume of exports in addition to that allowed for, may be achieved in some instances through increased production (as in the case of fish products) and in others by diversion from the domestic market or from stocks. Such orders could also have a significant effect upon price levels of export commodities generally.



With respect to the non-merchandise items, some increase in the receipts from gold and the tourist trade can be anticipated. Freight and shipping receipts may be somewhat lower, and interest and dividend payments may remain roughly unchanged.

Private Domestic Investment - The results of the survey of investment intentions, supplemented by independent estimates for agriculture and housing, indicate a planned outlay on new capital goods during 1948 of \$2,400 million. This is nearly 18 per cent in excess of the \$2,042 million estimated to have been spent during 1947. An outlay about 80 per cent above that in 1947 is planned for institutions. Substantially increased expenditures are also intended for utilities. With housing still short and with a somewhat larger government program being planned, a small increase in the number of dwelling units constructed is anticipated in 1948. After provision for higher prices the estimated increase in dollar outlay for housing is 19%. While a large accumulation of demand for capital goods still appears to exist in agriculture, outlay in this industry will continue to be limited by the allocation of steel to the farm implement industry and by the volume of imports. Planned investment in manufacturing, mining and commercial establishments shows only moderate increases, while the logging and construction industries indicate some reduction.

Various factors should be considered in appraising the likely realization of this program. Supply factors during 1948 should not constitute a serious impediment. By types of expenditure the investment program involves a 21 per cent increase for construction and a 12 per cent increase for machinery and equipment. After allowance for price rises over the year the construction program would involve only a very moderate rise in physical terms, while the physical requirements for equipment are probably no higher than in 1947. A comparison of these requirements with the production intentions of basic and building material producers suggests a considerable easing of material shortages during the coming year. While production of lumber and soil pipe is not expected to change, these estimates show expected increases of 10 per cent for cement, 35 per cent for steel pipe, 45 per cent for bath-tubs, 15 to 26 per cent for gypsum products and increases varying generally up to 25 per cent for nearly all other items. Steel and pig iron output is not expected to change much from





the 1947 level. This volume of production would appear to be adequate to support an unchanged real investment on machinery and equipment. However, the many competing demands for steel in both the export and consumer good field are certain to keep supplies short and to this extent hinder the realization of the program. Some projected outlays may also fail to materialize should the required imports be curtailed under the import control regulations. If export allocations of key materials are put into effect in the United States, this would constitute a further deterrent to realization of some investment expenditures. A further factor conducive to more adequate supplies is the anticipated reduction in expenditure during 1948 for repair and maintenance which constitutes a competing demand for materials and labour used to produce capital goods.

Apart from supply considerations, general economic developments as anticipated in this statement would not be apt to create any major alteration in business intentions during the year. Except for the possible rejection of the European aid proposals, no sudden deterioration in long run prospects appears probable. While price increases constitute a factor that could result in cancellation of projected capital expenditures, in view of the substantial rise in investment costs during 1947 it seems probable that business men in making their plans have taken account of the probability of continuing price rises. In view of these considerations it seems reasonable to allow for complete realization of the projected investment program, which would involve only a very moderate increase in real terms. Adding to this outlay an amount for inventory accumulation somewhat below that achieved in 1947, provides an estimate for total private domestic investment of about \$3.1 billion for 1948.

Personal Expenditure on Consumer Goods and Services - The forecast of consumer expenditure takes account of some influences in the consumer market in 1948 which were either absent in 1947 or not present in the same degree. The new circumstances stem largely from the restrictions imposed on the importation of consumer goods and components therefor, which create some new shortages or perpetuate those already in existence. Circumstances which are not new but which will be of growing importance include the sharp rise in living costs, particularly in the prices of the items that bulk large in the budget of the low-income groups, the

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satisfaction of some accumulated needs and the dwindling of some accumulated savings.

The forecast assumes an increase of about 13 per cent in expenditure on perishables, almost the whole of the increase being accounted for by the element of price. It provides for some shift in the pattern of consumption, with a substantial increase in food prices and only a slight reduction in the volume of food purchased. The only appreciable volume increase anticipated in this group is in petroleum products, subject to the continued availability of supplies from the United States.

For semi-durables the increase of expenditure envisaged is about 11 per cent, which would be made up of a substantial rise in price and a decline in volume. Dry goods and apparel account for all but a small part of the whole group. Import restrictions will curtail the supply of goods of this type (although the effect of shortages upon consumer buying will be deferred until inventories have been drawn down) and directly or indirectly accentuate the existing pressure on prices. In view of these developments, joined with the fact that some accumulated needs have already been met, it is anticipated that the volume of purchases will be somewhat curtailed.

Underlying the forecast of expenditure on durables is the assumption that supply will continue to be the final determinant where most large items are concerned. The consumer, shut off from access to imported goods except as they may be drawn out of inventory, will be dependent on domestic production less the provision for export. In view of the Government's policy of discouraging any efforts by domestic producers to make up for lost imports of finished goods by increased imports of components, in this estimate allowance has been made for the import of components and materials to the extent required to maintain the level of output achieved in the latter part of 1947. Since production of such items of which we have record was rising appreciably over the course of the year, this assumption would involve a supply of durables in 1948 little changed from 1947. However, the new excise taxes imposed on many durable items combined with other elements of price increase, are expected to involve a substantial increase in prices over the durables sector. The forecast therefore assumes an increase of 17 per cent in consumer expenditure on durables, with only a modest increase in the volume of purchases.



In services the price rises present and prospective are of much less consequence, by reason of continued rent control, the removal of the sales tax from utility charges and the stable levels for such items as transportation. The forecast looks to an increase in consumer expenditure on services of about 9 per cent.

Consumer expenditure as forecast for 1948 would be about 12 per cent above the level of 1947. On goods as a whole the assumed rise in price would account for most of the increase, with a slightly augmented volume of durables being partially offset by curtailed volume of non-durables.

Government Expenditure on Goods and Services - Calculations based largely on preliminary estimates of Dominion Government Departments and on a survey of anticipated investment and related expenditures by provinces and municipalities suggest that total expenditures by governments on goods and services may amount to about \$1,650 million in 1948, an increase of 10 per cent over the corresponding expenditures in 1947. Rising costs would account for the major portion of this increase. New investment outlays estimated for all levels of government show an increase of 14 per cent over those of the previous year with municipalities accounting for most of the rise. Figures for the Dominion Government allow for roughly the same percentage realization in 1948 of estimates covering investment outlays as was achieved in the two previous years. If the supply situation in the construction industry improves materially somewhat larger outlays may be realized.

Imports - Given the assumptions with respect to the level of economic activity, in the absence of deliberate efforts to restrict imports it seemed reasonable to expect a continuation through 1948 of the general trends in imports in 1947. However, even on those assumptions, it was expected that there would be a tendency for some imports to decline and for the rate of increase in others to slacken perceptibly. These developments would ensue as a result of inventories of some imported goods having been built up to satisfactory levels during 1947, and also as a result of domestic production coming forward to replace imports as the heavy investment program of the past two years came to fruition. At the same time import prices were expected to be higher.





On the basis of the foregoing considerations, and after special consideration of probable requirements and price trends for major import items, an estimate of \$2,475 millions for merchandise imports was arrived at. In the case of restricted items, this estimate provides for some increase in imports from countries other than the U.S. but not to the extent that their quotas would permit. It is unlikely, for example, that the U.K. could achieve so sharp an expansion in its exports of cotton fabric to Canada. In the case of capital goods, the estimate takes account of import controls as a factor limiting imports of particular items.

In the non-merchandise items provision is made for lower tourist outlays abroad resulting from restriction on dollars for travel and for about the same outlay as in 1947 on other invisible items.

#### Income Components

Salaries, Wages & Supplementary Labour Income - In view of the small increase anticipated in the number of employed wage-earners, almost the whole of the uncertainty with respect to labour income centres around the question of average earnings. Since the liquidation of war industry there has been a persisting upward trend in wage rates, and a particularly strong upthrust in certain industries where the expansion of employment was proceeding very rapidly. The increase in employment, the rise in wages, and the changes within the wage structure have combined to raise very substantially the earnings of the average worker, in spite of some reduction in hours. The increase in the typical wage-earner's income between 1946 and 1947 - about 15 per cent - exceeded the 10 per cent rise in the cost of living. The redistribution of the labour force, which describes in essence the employment situation during the first two full post-war years, and which was so important a determinant of average earnings by reason of the relatively heavy pressure on wage rates in the areas of acute labour shortage, is now accomplished. The localized pressure in these areas has already eased and the major influence on wage rates now appears to stem from a common source, namely the rise in the cost of living, through the influence of present and prospective increases on the wage demands of organized labour. It may be that an increase in average earnings that does not fall seriously short of the anticipated rise in consumer prices is a minimum condition for the maintenance of industrial peace. The forecast





therefore assumes an increase in average earnings roughly commensurate with the anticipated rise in consumer prices of about 10 per cent, which will involve an increase of 14 per cent in labour income on the previously stated assumptions with respect to employment. The assumed increase in average income of wage earners between 1947 and 1948 compares with an estimated increase of 15 per cent between 1946 and 1947, while a stable level of real earnings would compare with a modest improvement in the earlier period.

In view of the seasonal easing in the employment situation during the winter months and the tendency for wage negotiations to be undertaken in the spring, the assumption of maintained real earnings for the year as a whole is compatible with a deterioration in real earnings during the early months of the year.

Military Pay and Allowances - The forecast of this component takes account of the reduction in strength between 1947 and 1948, and the higher schedules of pay for personnel in the Armed Services announced at the turn of the year.

Investment Income - The forecast of investment income assumes about a 8 per cent increase in corporate profits and little change in the proportion of total dividends that will be paid abroad. It also assumes very moderate increases in other elements of investment income, with the exception of the trading profits of Governments, which is expected to decline fairly substantially. This would result from no net profit being earned on the trading activities of the Wheat Board in 1948. Provision is made for large payments during 1948 against participation certificates which is taken into account in the forecast of net farm income. Most other items in the trading profits of Government are assumed to increase moderately.

Net Farm Income - Net farm income for 1948 has been estimated at \$1,600 million compared with \$1,377 in 1947, an increase of 16 per cent (See Table VII). This estimate provides for substantial increases in cash receipts from most of the major groups of farm products. With respect to the principal grain crops, larger marketings, higher prices, and large retroactive payments covering the last three wheat crops, account for the substantial increase for this group. In the livestock groups, generally

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higher prices and larger marketing of cattle are expected to more than offset the further reduction in hog shipments. No noticeable change is expected in the production of dairy products taken as a group although prices will be somewhat higher. Lower egg production accounts for the decline in receipts from this source. In the "Vegetable and Other Field Crops" groups an anticipated reduction in prices for tobacco and sugar beets constitutes an exception to the general trend of stable or rising prices.

In the net estimate, provision is also made for a continuation of the upward trend in farm costs and at the same time for some reduction in the physical volume of farm inventories.

Net Income of Individual Enterprise, Non-Farm - During 1947 there was a large increase in the number of persons with their own business or profession, large relative to the increase in the number of wage-earners, on a proportionate basis, and large relative to the increase that had occurred in the previous year. While the rapid growth in numbers of 'own accounts' is not expected to continue, nevertheless in 1948 there will be a substantial increase over the average for 1947. This of itself would warrant an increase of income while in addition rising prices will raise the profits of small business as well as large. However, this group is extremely varied and includes the professions, whose income is relatively stable, as well as other groups whose income is highly responsive to a changing price situation. The forecast therefore takes account of the increase in numbers and provides for increased income beyond what would be warranted by numbers alone, making an increase of 9 per cent.

Indirect Taxes less Subsidies - Import restrictions are expected to involve some decline from 1947 levels in the revenue from customs duties and also a loss on excise taxes. The yield of sales tax on domestically produced goods would rise commensurately with the rise in prices and the somewhat higher volume of sales anticipated in 1948, with a partial offset as a result of the recent removal of sales tax from gas and electricity. Revenue from all other excise taxes will reflect the new or increased taxes on consumer durables as well as the reduced rates on sugar and glucose. When account is taken of all the foregoing considerations, the revenues accruing to the Federal Government from indirect taxes are expected to exceed revenues in 1947 by about 3 per cent.



The first part of the paper is devoted to a general discussion of the problem of the origin of life. It is shown that the problem is not only a scientific one, but also a philosophical one. The author discusses the various theories of the origin of life, and shows that the most plausible one is the theory of spontaneous generation. This theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The second part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The third part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The fourth part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The fifth part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The sixth part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The seventh part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The eighth part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The ninth part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility. The tenth part of the paper is devoted to a detailed discussion of the theory of spontaneous generation. It is shown that this theory is based on the fact that life is a complex of many different parts, and that these parts are all found in the same place, and at the same time. The author also discusses the possibility of life existing on other planets, and shows that this is a very real possibility.

In the Provincial and Municipal fields, indirect tax revenues are expected to increase moderately, from an estimated \$577 million in 1947 to \$607 million in 1948.

Subsidy payments, now relatively unimportant, are estimated at \$30 million for 1948. It is therefore expected that indirect taxes net of subsidy payments will amount to \$1740 millions.

#### The Labour Force, Employment & Unemployment

While the forecast of the labour force provides for participation by the various age groups of the population on much the same basis as in 1947, it provides for a somewhat higher percentage in the labour force in the case of some groups. For example, married women and pensioners may be induced into the labour market by the pressure exerted on their standard of life by rising prices. This would involve an addition of almost 60,000 persons on the average to the labour force in 1948 through new entries not offset by retirements. The labour force is now being augmented by a steady flow of immigrants and it is estimated that this will involve an increase of about 33,000 persons on the average. An estimate of the increment from this source involves somewhat arbitrary assumptions, not only with respect to the number of immigrants but the age and sex composition of the immigrant group since these will be important in determining the proportion able and willing to work. The addition to the civilian labour supply envisaged for 1948 - namely about 93,000 persons - would compare with an addition of about 115,000 in 1947. The point has been reached when the increase in employment must accommodate itself to the relatively small annual increments to the labour supply and an appreciable expansion in any particular segment must take place to some extent at the expense of employment elsewhere.

The forecast looks to a modest expansion of employment in 1948 and some slight shift of emphasis within the employment structure. Since the war industries were liquidated, employment has been expanding in almost every industry except agriculture, the pace of expansion being very rapid indeed in those segments where the demand for the final product was particularly insistent and where there was a supply of labour willing to enter the industry. By the end of 1947 the point had been reached where many industries had increased their employment to the limits permitted by





productive capacity and warranted by market prospects; some others, having satisfied the backlog of demand for their product, were adjusting to a lower level of output. There is also evidence that improving efficiency is now enabling some firms to maintain or even increase their output with a somewhat smaller labour force. Meanwhile, other industries whose expansion has been particularly hampered by the shortage of labour or materials or both, are expected to continue to increase the employment they offer, some of them at an accelerating rate. Out of contraction in some sectors, continued expansion in others, and comparative stability over very large areas it is expected that there will develop a slightly altered pattern of distribution with a slight shift of emphasis toward the major export and extractive industries.

In terms of particular industries, expectations for 1948 are that employment in agriculture, will remain much the same as in 1947 (except as statistics may register the varying participation by farm women in farm work), and that the very rapid expansion of employment in logging will begin to slacken perceptibly and stabilize near its present high level, subject to the usual sharp seasonal changes. In metal mining, which has lagged behind many other industries, the rate of expansion has recently gained new impetus and indications are that expansion will continue. With continued expansion in non-metallic mining and coal mining relatively stable, the industry as a whole should show an appreciable advance over 1947.

Manufacturing, more than any other industry, will bear the impact of the measures designed to relieve the U.S. dollar shortage - not only the measures Canada herself has taken but also those recently adopted by other countries. Consumer goods industries will be adversely affected by price rises in soft goods lines and by excise taxes and whatever import restrictions may be imposed on components of durable items, and therefore cannot be expected to maintain their present position in the employment structure. On the other hand, investment goods industries will expand their employment, although limited in many instances by continuing shortages of steel. Our traditional major manufactured exports - pulp and paper, non-ferrous metals and sawn lumber, appear likely to be in good demand, either in the U.S. market or as essential requirements in the European recovery program and



the expansion of their employment may be expected to proceed. Out of these opposing influences it may be anticipated that a modest increase in employment in manufacturing will emerge - probably a little more than 2 per cent.

Service industries, broadly defined, by the end of 1947 had already added to their staffs pretty much to the extent required by high levels of economic activity, and the impetus toward expansion has spent its force in most of these industries, although not in all of them. In 1948 trading establishments will be adversely affected by the limitations on the supply of consumer goods, and while more competitive selling may help to maintain their staff requirements, it seems reasonable to expect that the strong upward trend in employment will be arrested. The forecasts therefore envisages that trade, finance and insurance, transportation and communications will remain close to the high levels of employment attained in the latter part of 1947.

In the construction industry the demand for labour is expected to remain high and the supply of materials to improve, thus permitting a more efficient use of the available labour force. Employment may therefore be expected to expand although not commensurately with the volume of construction activity, except as a changing pattern of activity may require more labour.

With a more selective type of expansion developing and declining labour requirements in particular industries, the increase in employment in 1948 is expected to be about  $1\frac{1}{2}$  per cent. The distribution of employment between wage-earners and own accounts, non-farm, is not expected to alter materially from what it was in the latter part of 1947.

It seems probable that unemployment in 1948 will be somewhat higher than in 1947. There are several considerations which appear to support such an expectation. Seasonal factors, which in 1947 were partially obscured by the strong upward thrust of employment, may be expected to re-assert themselves in some degree in 1948. The measures taken to cope with exchange problems, both here and abroad, inevitably must disturb to some extent the lines along which expansion has been taking place; while the uncertainties involved are operative during the period of seasonal inactivity. The backlog of demand for some products has been satiated and a transfer of labour into those industries where



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demand remains insistent is almost certain to be hampered by material shortages and may be delayed by the difficulty of matching jobs and men by localities and skills. Finally, by reason of a steady flow of immigrants, the labour supply will be increasing somewhat more rapidly than in the very recent past. What is envisaged in terms of labour supply and demand will involve some easing of the acute shortage of female labour. Inasmuch as the unemployment envisaged will be either seasonal or concentrated in particular localities, which by reason of their industrial structure will feel the impact of the new developments discussed in earlier sections of the report, it will not involve any very perceptible general easing in the employment situation.





### PART III REGIONAL AND INDUSTRIAL OUTLOOK

#### THE INDUSTRIAL OUTLOOK

The purpose of this section of the report is to supplement other sections by providing greater detail on the outlook for particular industries. It is not intended to be comprehensive and attention is concentrated throughout on those industries whose special circumstances and special problems are expected to play an important part in shaping the course of events during the coming year. For some industries supply considerations remain overwhelmingly important in determining the volume of production while for others the firmness of the market, either at home or abroad, can no longer be taken for granted. It is believed that a presentation and analysis of the facts relating to particular industries will help to define the areas of shortage and the areas of potential surplus and thereby contribute to an understanding of the whole.

It is proposed first to examine the outlook for fuel and power as being of great importance to the level of industrial output that can be achieved; second, to consider the outlook for basic materials, which are equally if not more important in determining the probable volume of goods for use at home or for sale abroad; third, the outlook for construction materials; and, finally, the outlook for a variety of finished consumer goods industries.

#### Fuel and Power

The supply of coal in 1948 is expected to be adequate to meet a somewhat enhanced demand. In 1947 output from the Maritime coal fields was curtailed by a strike of three months duration and in the absence of industrial unrest in 1948 Maritime production will increase, while production by the Western mines is expected to be approximately the same as in the previous year. However, nearly all of our estimated 5 million ton requirements of anthracite and somewhat more than half of our estimated 40 million ton requirements of bituminous coal, come from the United States. Supplies from both domestic and foreign sources are expected to be sufficient to meet domestic needs and provide, in addition, about 1 million tons for export. Stocks are at satisfactory levels and it appears that a coal shortage is not likely to develop except as a result of prolonged work stoppages in either Canadian or American coal fields or



in lake shipping.

The maximum use of existing capacity for the production of hydro-electric power is inadequate to meet the needs of the economy operating at high levels of employment and income. The lack of rain in Central Canada during the latter part of 1947 has also contributed to the present power shortage. While a heavy nation-wide expansion program is under way, and additional plants with a capacity of over 500,000 horse-power are expected to come into operation by the end of the year, nevertheless the prospects are for continuing shortage during 1948. This hampers production in certain areas, namely Southern Ontario and the Niagara Peninsula in particular, but also in the northern mining areas of Ontario and Quebec. Pulp and paper, the largest industrial consumer, is not likely to be much affected in its operations, but an expansion of smelting and refining in some areas would compel the pulp and paper industry to shift to coal to obtain all the power it requires.

The U.S., our main source of supply for oil, is facing a serious shortage of this commodity. The output of crude oil appears to be somewhat short of requirements, and refining facilities inadequate, while the shortage of tankers, tank cars, and steel for pipe lines disturbs the distribution of available supplies. The scarcity of tankers and tank cars makes it necessary for the Canadian petroleum industry to curtail its imports of kerosene, stove, furnace and diesel oil from the U.S. during the first quarter of 1948 by 50% as compared with imports in the same period in 1947. While adequate supplies of oil are not assured, nevertheless it is expected that measures taken to cope with the problem will be successful in securing at least as large a supply as in 1947.

#### Basic Materials

This section is concerned with the outlook for the supply of important basic materials, and in each instance with the prospects of the secondary industries which process or fabricate the raw material. Although such an approach cuts across the common distinction between extractive and processing operations it permits a more coherent and unified presentation of the supply and demand outlook for final products.

Wood and Paper Products. For some years past the output of pulpwood and sawlogs has been limited by the supply of labour willing to enter the





logging industry. Since the end of the war, in spite of its unattractiveness, the logging industry has achieved a very rapid and a very appreciable expansion in employment. With the decline in demand for the lumber output of certain areas, labour can be shifted to the pulpwood cut, with the result that labour shortage has ceased to be a problem of prime importance for the logging industry.

The improving labour supply in 1947 was reflected in a record output of 5  $\frac{1}{4}$  billion board feet of lumber and it is expected that this record will be repeated in 1948. This would be achieved by about a 10% increase in B.C. production, offset in part by a decline in output in other parts of Canada, mainly in the Maritimes.

About half the output will be absorbed by the domestic market, and having regard to the improvement in stocks at the wholesale and retail levels during 1947, supply should be more adequate for the needs of the domestic user, although certain types of lumber may remain short. Exports in 1948 are expected to represent about the same proportion of total output as last year, but the U.S. is expected to receive a larger share -- about 60% as compared with 40% in 1947. Our competitive position with respect to price is good, domestic prices being somewhat below world levels, and prices for lumber of good quality in the American market are expected to remain firm. The British contract for Maritime lumber has been terminated and alternative markets in the U. S. are difficult to establish because of the quality of the product and the inadequacy of planing mill capacity to handle the rough lumber. However, local requirements have taken up some of the slack.

Turning to pulp and paper products, production is also expected to reflect the improved labour supply in the woods. Although only a small increase is expected in the output of fine paper, there will probably be more appreciable increases in the output of pulp and newsprint. Mill capacity is being increased and new capacity is to come into operation in 1948 in the Maritimes, in Northwestern Ontario, and in British Columbia.

The export market for these products is of overwhelming importance. It is expected that the U. S. will be able to absorb all that Canada is able to supply. The trend of newsprint price is still moving up and it may be expected that the increase in the value of exports will exceed the



increase in their volume.

Mining (other than coal) and Mineral Products. In metal mining, an expansion of output has been retarded by the scarcity of labour willing to enter the mines, and until very recently, employment was rising very slowly. The levelling off of some competing demands for labour, together with a small flow of immigrants, is now and will continue to contribute to an expanding employment and output in the mining industry. It is expected that the output of gold may increase as much as 10 or 15 per cent and modest increases in the output of base metals are also anticipated, mainly in zinc and copper, with lead and nickel little changed.

Base metals are in fairly strong demand in world markets. They are urgently needed for the European reconstruction program, although the means of financing such purchases would be very limited in the absence of substantial aid from the U. S. They are required in the U. S. itself to support the present and anticipated level of activity and also to carry out the stock-piling program, on which little progress has been made so far. Prospects for copper exports, in particular, are good, since the U. S. has suspended for two years its tariff on this metal. Shipment of substantial quantities of aluminum to the U. S. is probable, and this would involve drawing on stocks as well as appreciably increasing Canadian production. In evidence of the firmness of the market for metals, prices have shown signs of considerable stability at high levels.

Output and employment in non-metallic mining have been rising fairly sharply and the upward trend may be expected to continue. Having a wide range of uses, both at home and abroad, and particularly important for construction purposes, demand in general may be expected to be adequate to absorb increased output.

Iron and Steel and Their Products. Perhaps the most important area of shortage is in primary iron and steel. Production in 1948 is expected to be at effective capacity, as it was in 1947, and since no new capacity is to come into operation at the primary stage output of steel ingots is expected to be substantially unchanged, that is, about 2.9 million net tons. The limited supply of pig iron restricts operations in the foundries and, together with the shortage of scrap, prevents a more intensive utilization of steel-making capacity.





At the finishing stages, some new capacity in the form of a strip mill, is expected to come into operation in the latter half of the year. While new finishing capacity of this kind reduces our dependence on imports from the U. S. and is to be welcomed on that score, presumably it can be operated only by diverting some raw steel from other uses, since the bottleneck is at the primary stage.

About 1/3 of Canada's requirements of steel in mill forms is imported from the United States and so long as steel continues to be a troublesome shortage in that country, any appreciable increase in imports is unlikely. Although some improvement in steel supply is expected in the U.S., it is possible that export controls may be imposed. Taking into account both domestic and foreign sources, the supply situation does not seem likely to show much improvement, except that more than a year's uninterrupted capacity operation must have built up inventories to some extent and ironed out some of the imbalances that retarded the flow of steel in a form suitable for use.

The demand for steel should be considered in relation to the prospects of certain of the major steel-consuming industries, namely agricultural implements, railway rolling stock and shipbuilding.

There is a large, unsatisfied demand for agricultural implements at home as well as abroad, and there would be still greater potential markets abroad if the U. S. were to extend a substantial measure of assistance to Europe. In 1948 employment in this industry and presumably production also, are expected to show an appreciable increase over 1947, although limitations on the supply of steel will prevent it operating at capacity. Imports of agricultural implements from the United States constitute an important part of the supply available to Canadian purchaser and a substantial increase in imports is anticipated. Unlike most other steel consuming industries the agricultural implement industry has some export markets in the U. S., as well as in other countries. This industry, by reason of its essentiality and its ability to earn U. S. dollars, is not restricted in its imports of parts or of finished goods.

The railway rolling stock industry also has assured markets through 1948 and indeed beyond. Orders have been placed for about 16,000 cars and 260 locomotives, about half of which in value is for export, mainly to India and South Africa, and to be paid for in hard currency. It is expected that



about 2/3 of these orders will be completed in 1948. Production is hampered by shortages, notably by shortages of steel plate, and shipments of plate have been curtailed for the first quarter of this year in order to permit plate mills to catch up with their backlog of unfilled orders. In 1948 employment in the industry is expected to increase fairly substantially, subject of course to the availability of steel.

In 1947 the shipbuilding industry was very active, largely as a result of orders financed through export credits. At present the industry has on hand and in progress orders amounting to about \$100 million for new construction, in addition to a substantial volume of repair and refit work. All but a small part of the new construction on order will be completed and delivered in 1948 and unless new orders are forthcoming, activity in the industry will decline sharply during the latter part of the year. Like railway rolling stock, shipbuilding is adversely affected by the shortage of steel plate. Some of the centres in which the industry is located have few if any suitable alternative opportunities to offer workers who may be released from shipbuilding. Hence a decline in shipbuilding activity is likely to create some significant local unemployment problems.

Large amounts of steel are also used by other industries: for railway maintenance, in construction, in the manufacture of machinery and equipment and of durable consumer goods. The demand for steel in these uses is urgent, as is indicated in Part I in the review of investment plans and of the prospects in the consumer market. The lack of adequate finishing capacity for the type of steel used in durable consumer goods is a special limiting factor in these industries.

Other Basic Materials. Certain chemical products are also in somewhat short supply, perhaps the most important being fertilizer. Our inability to expand production, which is now at capacity, would be reflected in the size of our exportable surplus. Soda ash also is not in good supply, along with several other industrial chemicals.

#### Construction Materials

The supply situation with respect to two important construction materials, namely lumber and steel, has already been referred to. In connection with steel there are two points that should be mentioned here. The construction industry requires a wide range of highly fabricated bits and pieces and is therefore heavily dependent on receiving an even and balanced flow of steel products for assembly on site. A better balance in production has in fact been achieved, a balance not reflected in over-all production





figures. This will redound to the advantage of the construction industry. For large structurals, the industry depends on American sources of supply and import controls will be used to ensure that imports are not available for building which does not serve either of two purposes: (1) save or help us earn more U.S. dollars or (2) maintain an essential public service. As a consequence some plans, particularly in the commercial and service fields, will have to be abandoned for the present.

In 1948 production of a variety of products and materials used by the construction industry is expected to be substantially greater than in 1947. Reference is made in Part I of the report to the results of a survey of the production intentions of producers of building materials. The volume of construction expected to be performed in 1948, and the anticipated changes in the composition of the work, are also set forth in Part I of the report and need not be recapitulated here. A review of demand and supply aspects suggests a marked improvement in 1948 in the material shortages that have plagued the construction industry. The labour shortage should also be eased, by reason of an increase in numbers and some accumulation of skill and experience, while improving supplies will help to diminish the wasteful use of building labour.

#### Consumer Goods Industries

The exchange conservation program creates in 1948 a new set of conditions for industries producing consumer durables. Imports of radios, refrigerators and furniture are prohibited and of motor cars severely restricted, leaving the domestic market to be supplied by the domestic producer. At the same time new or increased excise taxes have been imposed and an expansion of production in Canada that would require a substantial inflow of components from the U.S. is not to be encouraged. Thus both conditions of supply and conditions of demand are altered, although the basic situation of accumulated need for most goods of this class remains essentially unchanged. The outlook may be reviewed by reference to specific products.

In 1948 the adequacy of demand for motor vehicles at prevailing prices may be taken for granted and uncertainty centres on the level of output the industry may be able to achieve. It is expected that exports will be curtailed as a result of restrictions imposed by other countries, leaving a greater proportion of output for the domestic consumer. On the



other hand, the production of radios in 1947 went far to meet accumulated demand, export prospects are poor, and in spite of some shift toward larger models, employment and production are not likely to be sustained at the high level reached at the end of 1947. There is still a large unsatisfied domestic demand for refrigerators, fair export prospects, and new capacity to come into operation at the end of the year. Although some decline in exports of washing machines is anticipated, domestic demand is considered capable of absorbing available supply. A larger output of stoves is expected to find ready sale at home and abroad. For some time the small items of electrical equipment have been in good supply. The furniture industry has lost its export market for utility furniture in the U.K. and the domestic market is becoming more selective as to quality and price. Import restrictions imposed on veneers are creating some difficulties, while rising prices are likely to have adverse effects on sales.

Among the industries producing non-durable consumer goods perhaps the one that warrants most attention is the textile industry. In woollens an appreciable increase in domestic production is expected in 1948, and with increased imports from the U.K. the supply of woollen fabrics will be very much improved. The small increase anticipated in rayon production is not likely to offset reduced imports from the U.S., while the substitution of rayon for cotton by clothing manufacturers and by the tire industry will intensify the demand for this type of fabric. In cotton, there is considerable uncertainty surrounding the supply of cotton fabric that will be available from the U.K., and domestic production is not expected to increase, with the result that the available supply of cotton fabric might be reduced by as much as 15-20 per cent from the level of 1947. In addition, imports from the U.K. are in general higher priced than those from the U.S. These varied conditions will be reflected in the experience of the secondary textile industries. Since firms cannot readily shift from one type of fabric to another or from a low-priced market to a quality market, some dislocation of production and employment may be expected to occur.

There are several industries manufacturing non-durable goods mainly for sale to the final consumer in which some decline in employment or production or both may be expected, and still others in which a stable situation may develop in 1948. In footwear sales have tended to lag behind



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the upward trend of retail sales in general, and substantial price increases associated with the removal of subsidies on hides are being passed forward to the consumer, to the detriment of future sales. Import restrictions have also had some adverse effects in the leather industry. Likewise in certain types of rubber footwear, markets do not appear to be adequate to absorb current production, and although the demand for passenger car tires is easing there is still a considerable backlog of demand for tires for commercial vehicles. Those factors in combination are likely to involve some reduction in output and employment in the rubber industry. In food processing industries, rising prices and restricted supplies of some agricultural products, may also involve some slight loss in production and employment.



## THE REGIONAL OUTLOOK

Although the general economic outlook for the nation as a whole is favourable, it is necessary to recognize that it is not equally bright for all the regions. The following statement reviews general trends and prospects from the regional point of view, indicating the more important probable variations from the overall national prospect in the five main regions and the major industrial areas. It also includes a brief comparative analysis of regional employment, investment and export prospects.

It will be appreciated that the problems of regional forecasting are intensified by the relative lack of statistical data for the geographical subdivisions which are dealt with in this report. This applies in particular to the problem of appraising the regional impact of a given investment program.

In addition, it is particularly difficult to assess the regional incidence of such important and uncertain factors as the nature and extent of the European Recovery Programme; the extent to which further tariff adjustments become effective under the Geneva Agreements in 1948, and the effects which the import restrictions may have as the program is developed in coming months.

### Maritime Provinces

Economic conditions in 1948 may be slightly less favourable than in 1947 - a year when the Maritimes did not share fully in the general level of national prosperity.

The Maritimes have had more severe problems of postwar adjustment than any other Canadian region, and this has been reflected in a higher rate of unemployment, in spite of a continued outflow of population. Employment has been increasing gradually in 1946 and 1947 from the postwar low point, but the improvement has been less than in the other four main regions. Average wage rates have not risen as much, and remain lower than elsewhere. Long-run problems are becoming apparent, involving limited opportunities for employment expansion. These factors have resulted in a demand for consumers' goods, which has expanded less during the postwar period than in the rest of Canada. Foreign markets are of particular importance to the Maritimes, the economy is therefore highly vulnerable



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to conditions abroad, and the dollar shortage has already adversely affected the Maritime economy.

Agricultural prospects depend to a large extent upon the export outlook for apples and potatoes. The loss of the U.K. market has been a serious blow to the apple growers, but there has been some compensation in moderate U.S. tariff concessions and improved handling technique. However, with an average crop, serious marketing problems may arise. The outlook for seed potatoes is fair, since tariff concessions in the United States should improve the market.

Among forest industries considerable development and capacity operations may be expected for pulp and paper. On the other hand, the termination of the British contract for Maritime lumber will likely mean a 25 - 30 per cent decline in the log cut. An increasingly important market for dressed lumber in the United States should result from the recent tariff concessions, but technical and financial difficulties have forced curtailment on the part of small operators. The effects on employment will be partly mitigated by a turn-over to the pulpwood cut, by the migration of loggers to other provinces, and also by the fact that for many of the workers logging is only supplementary to agriculture.

The overall prospects for the fishing industry are quire favourable. The market for fresh and frozen fish has been improved as a result of the United States concessions at Geneva. Current demand for cod fillets has been strengthened by the rising meat prices in this country and the United States, and as a result, payments to the fishermen have been raised very substantially. The outlook for salted fish would appear to be fairly satisfactory.

Production of coal, iron and steel, and steel products is rising and employment may be expected to increase slightly. There is considerable uncertainty as to the course of labor relations owing, in large part, to expected demands of unions for nation-wide contracts. Ship construction contracts are expected to maintain employment at the Halifax Shipyards provided shortages of steel do not limit progress on the Argentine contracts and labour relations remain satisfactory. At the Saint John Drydock the position is uncertain owing to the dependence on the flow of repair work. The orders for railway equipment will ensure capacity

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production in this industry for at least the first half of the year.

The demand for consumers' goods in 1948 may be expected to reflect the relatively sluggish development of the Maritimes, and with recent increases in the cost of living there, as elsewhere, a decline from 1947 levels is probable in sales of the more dispensable items.

In money terms private investment and repair expenditure is expected to remain about the same as in 1947 in manufacturing, to be down considerably in mining and woods operations, and up in utilities, making little change in aggregate. Planned provincial and municipal expenditures show only a small increase. Having regard to the rising level of investment costs, anticipated expenditures will involve an appreciable reduction in real terms. However, expenditures for construction (probably more important from the point of view of this region) are expected to show a modest increase, although not enough to suggest the same volume of construction as in 1947.

Total unemployment is likely to be at the same level or perhaps slightly higher than in 1947. Those centres in which unemployment may remain serious in 1948 include Amherst, New Glasgow and the Cape Breton industrial area. Saint John, Moncton, and Halifax areas may experience considerable unemployment in 1948 as a result of uncertainties as to rail, port, shipbuilding and repair activities.

#### Quebec

It may be anticipated that employment and production in 1948 will be somewhat above the high level reached last year.

Extensive postwar industrial reorganization contributed to the development of significant unemployment problems in some centres. This situation was aggravated by the fact that a number of important war plants were of a specialized character and did not lend themselves readily to peacetime conversion. Subsequently, however, heavy industrial expansion and diversification reduced unemployment sharply, and even led to labour shortages in several of the main areas.

It is probable that employment and production in manufacturing industries as a whole will be slightly higher in 1948 than in 1947, although expansion of output in some lines may be hindered by material and equipment shortages, resulting in part from import restrictions.



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In the iron and steel industry a moderate expansion of activity is anticipated in most groups, particularly in railway rolling stock, although this may be partially offset by a foreshadowed decline in ship-building. It is possible that other industries may be affected by an insufficient steel supply.

In the base metal mining and smelting group, the United States tariff concessions on aluminum and copper should greatly increase the demand for these products, but capacity for immediate expansion is limited. With the gradual improvement in the supply of labour, a moderate rise in gold production may be expected, if labour management relations are satisfactory. Among other minerals, the prospects for asbestos are uniformly bright.

The textile industry will feel the impact of the restrictions on imports of textile fabric, which will curtail needed supplies to the secondary industries at the same time as it provides further incentives for the primary industries to expand production and employment. For clothing, however, as for some other consumer soft goods, at the prices likely to prevail in 1948 demand would hardly warrant the same volume and composition of production as in 1947. These conditions will involve some shifts of employment within the industry, but probably not much change in aggregate. The need for shifts may involve localized unemployment, particularly since women workers are often unable or unwilling to move from place to place.

Of the forestry industries, the pulp and paper group is expected to expand output moderately in view of the larger pulpwood cut this winter. On the other hand, the lumber operations are likely to be on a somewhat smaller scale this year.

If normal crop conditions prevail in 1948 agricultural income should increase substantially in line with increased prices. The fishing industry may suffer from the falling off in relief demands for low grade canned and pickled fish.

Parallel with the generally favourable trends in the regional economy, the demand for consumers' goods is likely to be fairly firm.

Private investment and repair expenditure is expected to be up slightly in manufacturing, maintained in primary industry and to be



substantially higher in utilities. Capital outlay by the province and the municipalities is expected to rise moderately. Machinery and equipment show an appreciable increase as contrasted with unchanged anticipations for construction.

It may be expected that the levels of employment as a whole will be somewhat higher than in 1947, with continuing tightness of the labour market in such areas as Montreal, Sherbrooke, and Chicoutimi. However, this situation may be accompanied by significant unemployment problems in Hull and Sorel and difficulties may also arise in Greater Quebec and Valleyfield.

#### Ontario

During 1948, the level of economic activity in this region will continue to be limited by the available supply of labour, materials and equipment, as it was during 1947.

The problems of reconversion of industry in Ontario have been less difficult than elsewhere because of the diversified nature of the economy. In the postwar period, Ontario has undertaken greater industrial outlays per worker than any other region of Canada. As a result of extensive development of its diversified industries, Ontario now has a capacity to absorb a considerably greater labour force, particularly in many skilled categories.

Manufacturing industries are expected to operate near capacity, apart from the initial dislocation associated with import restrictions. Labour and material shortages will limit the expansion of plant capacity and employment which would otherwise have occurred. On balance restrictions on the importation of finished and semi-finished goods have a stimulating effect on a manufacturing economy. With diversified manufacturing industries largely oriented toward the domestic market, Ontario, perhaps more than any other province, could be expected to expand its production to fill the gap caused by import restrictions. The restraining influence of shortages will therefore be particularly apparent in this province.

Employment forecasts suggest that there will be little change in the operations of the primary iron and steel industry this year. With a very high demand for nickel and copper, employment would expand since more





labour is expected to move into the industry. In spite of improved labour supply the outlook for gold mining, faced with sharply higher costs and uncertainty over the Government's bonus proposals, is less favourable than for the base metals.

Little change is expected in lumber output. However, a substantial increase is probable in the pulpwood cut and in the output of pulp and paper. Several new plants have been opened in the Lake Superior area.

Net agricultural income as a whole is likely to increase owing to the rise in food prices exceeding the increase in farm costs. Some livestock farmers may suffer, however, from the increase in feed costs.

Reflecting employment trends and earnings somewhat higher than in the Dominion generally, consumer demand during 1948 may be expected to be even heavier than in 1947.

The anticipated private capital expenditure, especially for utilities, is appreciably higher than in 1947, a year of intensive activity. Provincial and municipal capital outlay is also expected to rise considerably. These factors, when coupled with a housing program which is expected to be somewhat larger than last year's program, will probably involve continuing pressure on the capacity of the construction industry, in spite of an improving supply of materials and the opportunity thereby presented to make more efficient use of scarce construction labour.

Unemployment has been at a very low level in all parts of the province and may be expected to remain low in the coming year. Import restrictions will have some dislocating effect in areas whose industries depend on components from the U.S., in particular the automotive centres of Windsor and Oshawa, but are not likely to reduce overall employment appreciably.

#### Prairie Provinces

If average crops are harvested in 1948, it is likely that employment will be slightly higher and income considerably higher than during 1947.

The main physical changes in the prairie economy during the war were connected with the reduction in wheat acreage, a corresponding increase in feed grains and a very great expansion in hog production. Since the end of the war, however, there has been a strong tendency for

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agriculture to return to the prewar pattern. World food shortages, good crops and favourable cost-price relationships during the past five years have led to a remarkable reduction in farm debts. This has been an important factor in the heavy and, as yet generally unsatisfied, demand for producers' and consumers' goods.

In 1948 retroactive payments on previous years' crops will constitute an appreciable part of agricultural net income. These payments, combined with a rise in the price paid on the current wheat crop and generally higher feed and livestock prices, should sustain farm buying power even if a lower than average crop is harvested. There is not likely to be any material change in the output of the meat packing industries.

The prospects for the extractive industries are favourable; the coal mines face the year with an assured market, although currently closed by strikes; base metal mines producing mainly copper and zinc, anticipate a moderate rise in production; and there is every reason to expect that the development of the oil resources in the Leduc fields will continue at an increased pace.

Provincial and municipal government investment and repair expenditure is expected to increase substantially. In money terms, the construction included in the plans outlined above is much increased, and would undoubtedly involve a higher physical volume than in 1947.

Since 1939 there has been an outward flow of population which has approximately offset the natural increase. Unemployment is at a low level in most areas of the region and general employment prospects for 1948 are favourable. In none of the principal cities is there likely to be any significant problem of unemployment.

#### British Columbia

It seems probable that the level of economic activity will be slightly greater in 1948 than in 1947 - a year marked by considerable development and high levels of production.

In the postwar years British Columbia has had severe problems of readjustment which were precipitated by a rapid decline in shipbuilding and aircraft manufacture, and by a postwar continuation of the strong wartime influx of labour, particularly to the Vancouver area. These problems have been reflected in a level of unemployment in the postwar years which is





considerably greater than the Canadian average. On the other hand, however, the rapid growth of population and the heavy world demand for the products of the basic industries has fostered an optimism in British Columbia which is reflected in the very rapid development of many large and small manufacturing establishments, major housing developments, extensive long-range plans for the development of public utilities, heavy government expenditure, higher wage levels than elsewhere in Canada, and increases in per capita expenditure considerably greater than for Canada generally.

The outlook for the province's major industries is generally strong. The output of lumber may be as much as 10 per cent about 1947, with labour supply generally satisfactory. The market is expected to remain very active, since the United States, especially under the new tariff concessions, is expected to absorb export supplies not taken under the United Kingdom contracts. Operations in the pulp and paper industry are likely to be at capacity in the face of strong demand and rising prices. New capacity has been brought into operation and further developments of the industry are planned on Vancouver Island and the mainland.

In base metal mining and smelting, both higher production and prices may be expected in view of the prevailing market picture. Labour supply for selected classes of workers may present problems and there may also be some difficulty with labour relation. If the coal strike is settled in the near future, production may be maintained at last year's level.

The United States market for raw fish is very strong, and is likely to go higher, particularly as a result of the recent tariff concessions. However, the position of the canning industry has further deteriorated since it has been difficult to get supplies in competition with the American canners.

The demand for B.C. apples is likely to remain favourable, the domestic market being expected to hold up, and an expansion in export to the United States offsetting the termination of the United Kingdom contract.

Activity in the shipbuilding industry is expected to show a considerable decline by the middle of the year unless new orders are

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received. Port activity is likely to remain at roughly the same level as in 1947 although there are indications that labour relations may present a problem.

Consumer expenditure in British Columbia has shown a greater increase in 1947 than for Canada generally. The anticipated rise in population, wage rates and industrial production above 1947 suggest that consumer expenditure in 1948 may increase considerably over last year.

In the private sector of the economy, forecast outlay for investment and repair is roughly the same as for last year, which, allowing for price rises, will mean some decline in physical activity. Expenditure on capital and repair by the province and the municipalities, much of it made necessary by the large increase in population, is likely to be considerably greater than in 1947 and would probably take up any slack in the private sector.

The overall level of employment may rise a little. If the influx of labour persists however, there may well be unemployment problems in the Greater Vancouver area. The relatively small unsatisfied labour demand indicates a vulnerable position.

#### Regional Comparisons

Economic conditions generally reached new peak levels in the various parts of Canada during 1947. Despite this, the situation was not uniform, unemployment persisting in several areas particularly in the Maritimes. In 1948 even higher levels may be attained particularly in the Prairies and Ontario. No significant change is likely in the Maritimes, although a slight decline is not unlikely.

A tight labour supply situation prevails in most of the important industrial centres of Ontario and in many localities in Quebec. This condition may be eased somewhat during the year, although it will probably remain an important factor limiting industrial expansion. On the other hand serious unemployment problems are likely to continue in the Maritime industrial areas of Cape Breton, New Glasgow, and Amherst. A significant volume of unemployment may continue to characterize Moncton, Halifax, Sorel, and Hull, while the situation in Quebec, Valleyfield, Oshawa, Windsor, and Vancouver may deteriorate sufficiently to cause difficulties.

In addition to the segments of the public and private investment



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The tenth part of the report deals with the environmental situation. It is a very interesting and informative study of the environmental conditions. The author has done a great deal of research and has gathered a wealth of material. The report is well written and is a valuable contribution to the knowledge of the country.

program already discussed on a regional basis, it is estimated that there will also be a small increase in real terms in investment in the residential, institutional, and commercial segments. It may be presumed that such investment is likely to take place in the regions where increasing population, income and employment make it necessary or profitable; and thus contribute to an unequal regional incidence of capital and repair expenditures. However, the impact of a high level of investment activity is more pervasive and more uncertain than the foregoing might seem to suggest. While a large part of construction expenditures must be spent locally, this would not apply to purchases of machinery and equipment, nor to building materials, whose production tends to be widely dispersed. For example, Ontario which plans the largest increase in expenditures, will provide machinery and equipment for other regions. These considerations would reinforce the high level of activity already indicated for the more highly industrialized regions.

The uncertainties of the outlook for the export markets focuses attention on the difference in the degrees of dependence of the various regions on conditions in foreign countries. The Maritimes, the Prairies, and British Columbia are obviously most directly affected but their prospects differ considerably. The Maritimes are in the weakest position depending on relatively uncertain markets for their lumber, fish, and agricultural produce. On the other hand, in the Prairies the current high demand for grains and meat products throughout the world and the prospect of maintained demands for some years hence should provide the Prairies with an extended period of prosperity. The foreign market for the forest, fish, fruit, fertilizer, and non-ferrous metal industries of British Columbia are flourishing.



program already discussed as a national policy, it is evident that this will also be a small business, in each sector of investment in the investment, particularly, and somewhat less so, in the way it is presented that such investment is likely to take place in the regions where the existing population, income and employment are at present or potential and that maintenance of an average regional level of activity and growth is important. However, the degree of a high level of economic activity is more pronounced and more immediate than the economic activity is in general. While a large part of investment expenditure will be spent locally, this would not apply to purchase of machinery and equipment, nor to building materials, whose production tends to be more dispersed. For example, Canada which places the largest emphasis on expenditure will provide machinery and equipment for other regions. These expenditures alone would reinforce the high level of activity already existing for the more highly industrialized regions.

The importance of the subject for the present study is based attention on the differences in the degree of dependence of the regions on activities in foreign countries. The Caribbean, the Pacific, and British Columbia are obviously most heavily affected and hence prospects differ considerably. The Pacific area is the most dependent on relatively uncertain markets for their exports, their oil, agricultural products. On the other hand, in the Caribbean the current high demand for grain and meat products throughout the world and the prospect of continued growth for some years ahead provide the Pacific with an extended period of prosperity. The Pacific market for the region, India, Brazil, Argentina, and numerous other industries of British Columbia are flourishing.







